

Lalida Chareanviset 2014: The Correlation between Macronutrients and Body Mass
Index of Adolescents : A Case Study Sriyanusorn School in Chanthaburi.
Master of Science (Home Economics), Major Field: Home Economics,
Department of Home Economics. Thesis Advisor: Assistant Professor
Anchanee U.Patanacheep, D.Sc.89 page.

This research aims to study the correlation and predict the influence of protein, fat and carbohydrates on adolescents' BMI, including to compare the every intake and exercise duration between the subjects with $BMI \geq 23 \text{ kg/m}^2$ and those with $BMI \leq 22.9 \text{ kg/m}^2$. The equal amount of 114 subjects with $BMI \geq 23 \text{ kg/m}^2$ and $BMI \leq 22.9 \text{ kg/m}^2$ were withdrawn by means of cluster and simple randomize sampling from the secondary education class level of 1-6 of Sriyanusorn School Chanthaburi Province. The interview from of 24-hr recall and food consumption behavior were used in this study. The statistical methods for analysis were Peareson's correlation multiple regression and t-test. The result indicated that more than 50% of both group were female. The meal frequency consumption and food expense among students with $BMI \geq 23 \text{ kg/m}^2$ were higher than with $BMI \leq 22.9 \text{ kg/m}^2$ and both groups however preferred fried and deep-fat fried food than other cooking methods, energy intake of subject with $BMI \geq 23 \text{ kg/m}^2$ was significant higher than those with $BMI \leq 22.9 \text{ kg/m}^2$ ($P < .01$). The duration time of exercise among group with $BMI \geq 23 \text{ kg/m}^2$ was significant less than another group ($P < .05$). From the result of Peareson's correlation and multiple regression could predict that fat intake($b=.112$) was the most risk factor for increasing adolescent's BMI, while protein($b=.025$) and carbohydrate($b=.023$) intake were respectively risk factors at statistical significant level of .001

Student's signature

Thesis Advisor's signature